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## ISOTOPIC AND GEOCHEMICAL ASSESSMENT OF CONFINED THERMAL AQUIFERS OF SOUTHERN CORDOBA PROVINCE, ARGENTINA

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### ABSTRACT

The study area is located in the Pampean Plain (Córdoba, Argentina), where the groundwater resources of major interest are confined deep aquifers, which are often used due to the poor quality of the shallow unconfined aquifer. The study objective is to present a preliminary hydrogeochemical and isotopic model of the deep aquifers. Hydrogeological and isotopic analyses are used to characterize the deep aquifers. Three deep multilayered aquifer systems were defined taking into account groundwater quality: a semiconfined lower deep system, a confined system with a low degree of confinement and a highly confined system. All have hypothermal and mesothermal sodium sulphate type waters. The isotopic composition of local and western allochthonous streams, and the characteristics of the deepest confined aquifers, suggest deep aquifer recharge is located outside the study area in the perimountain western region.

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**Reference:** Cabrera, A., M. Blarasin, C. Dape, E. Matteoda, and H. Panarello. 2009. Isotopic and geochemical assessment of confined thermal aquifers of southern Córdoba Province, Argentina. *Journal of Environmental Hydrology*, Vol. 17, Paper 22.

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